AirCard® 700 Series Wireless Network Card

Installation Guide

2130204CE
Rev 2.4

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6,169,884	6,191,741	6,199,168	6,327,154	6,339,405
6,359,591	6,400,336	6,643,501	6,516,204	6,561,851
6,653,979	6,697,030	6,712,627,	D367,062	D372,248
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1: Introducing the AirCard® 700 Series Wireless Network Cards

- AirCard 700 Series wireless network cards
- Differences between the AirCard 750 and AirCard 775
- Your account and coverage area
- AirCard software
- Before you can begin using the AirCard
- Package contents

AirCard 700 Series wireless network cards

The AirCard 700 Series wireless network cards are accessories for your PC that allow you to connect to the Internet, send and receive e-mail, and connect to a corporate network, without the need of a network cable or phone line. Depending on your AirCard configuration, you may also be able to use it as a mobile phone.

Caution: Do not insert your AirCard into your PC Card slot before installing the software.

The AirCard fits into the standard (Type II) PC Card slot available on most notebook PCs. The AirCard fits into the standard (Type II) PC Card slot available on most notebook, Handheld, and Tablet PCs. You can also use the AirCard with a Pocket PC provided you have the PCMCIA jacket accessory.

Supported operating systems

The AirCard wireless network cards work in:

- Notebook PCs running Windows 98 SE, NT 4.0, 2000, Me, and XP. (See Chapter 3 for more details.)
- Tablet, Handheld and Pocket PCs running Windows CE 3 or CE .NET (CE 4). (See Chapter 4 for more details.)

The AirCard as a network card

The AirCard 700 Series network cards can be configured to provide the “always-on” data connection that an Ethernet card or other wired LAN card provides. That is, you can set options in Watcher™ (a program that comes with the AirCard) that

will cause the AirCard to establish a network connection whenever you insert it, assuming GPRS (General Packet Radio Service) or EDGE (Enhanced Data GSM Environment) service is available. Otherwise, you can configure Watcher to connect only when you select a button.

The AirCard connection provides access to the Internet. Once the connection is established, you can open your browser and connect to any web site available on the Internet, or access other Internet services (such as e-mail).

The AirCard as a mobile phone

If your AirCard is voice-enabled, you can use the AirCard as a phone simply by connecting an approved headset. The keypad for the phone is in the Watcher program.

If you want to use the AirCard as a phone, a headset is necessary. You require a 4-wire headset with a 2.5 mm connector. Approved headsets are listed on the Sierra Wireless web site, www.sierrawireless.com.

Differences between the AirCard 750 and AirCard 775

This manual is a complete guide to both the AirCard 750 and AirCard 775 wireless network cards. Both are PC Cards that operate on GSM (Global System for Mobile communications) networks. The difference between these products is in the data services and frequency bands they support.

GPRS and EDGE service support

GPRS and EDGE are add-on data services to GSM mobile phone networks. GPRS provides a maximum data transmission speed of 56 kbps while EDGE provides a maximum data transmission speed of 216 kbps. The AirCard 750 supports GPRS while the AirCard 775 supports GPRS and EDGE service.

Frequency band support

Every GSM network operates on one of these radio frequency bands:

- **850 MHz band**—used by some North American service providers

- **900 MHz band**—used by some European service providers
- **1800 MHz band**—used by some European and Asian service providers
- **1900 MHz band**—(also called the PCS band) used by many North American service providers

The AirCard 750 is a tri-band product operating on the 900, 1800, and 1900 MHz bands. The AirCard 775 is a quad-band product operating on the 850, 900, 1800, and 1900 MHz bands.

Your account and coverage area

Note: If you purchased the AirCard from a GSM service provider, you may already have an account. Otherwise, your retailer should be able to provide you with the names of companies that provide this service.

Companies that operate GSM networks and provide access to those networks are called service providers. You must have an account with a GSM service provider to use the AirCard. If you are using the AirCard 750, you should select a service provider that offers GPRS service, and, if you are using the AirCard 775, you should select a service provider that offers EDGE service.

When you obtain your account, you will be given a SIM card, otherwise called a "smart card" or "smart chip". (Depending on how you purchased your AirCard, you may already have an account, and your SIM card may have been included in your package.) The SIM card contains account information and must be inserted in the AirCard anytime you use it.

Before you can use the AirCard, you must install the AirCard software and ensure that your AirCard is configured to use your account. Instructions on completing these steps are provided in the chapters that follow.

Once installed and configured, you can connect to the Internet with the AirCard in any area in which you can obtain GPRS or EDGE service. Your ability to obtain service depends on these factors:

Note: The fee for service is usually higher when you are "roaming" (connected to a network other than the one belonging to your service provider).

- **Proximity to an GSM/GPRS/EDGE network**—You must be within the coverage area of a GSM network on which GPRS or EDGE has been implemented, in order to use the AirCard.
- **Service provider**—If you are within the coverage area of a network that is not operated by your own service provider, you can only obtain service if there is a roaming agreement between your service provider and the network operator.

- **Account provisions**—Your account may restrict your usage to certain networks or limit the amount of time you can use the network.
- **Frequency band**—If you are using the AirCard 750, you cannot connect to networks operating in the 850 MHz band, regardless of roaming agreements or account provisions.

Most service providers have coverage maps on their web sites.

AirCard software

The AirCard comes with this software (made by Sierra Wireless):

- The Watcher program that you use to manage the AirCard and monitor your connections
- The driver software that forms the interface between the network card and your Windows operating system
- For notebook PCs only, the Network Adapter Manager software that allows you to switch between the AirCard and other network cards
- The Network Adapter Manager software that allows you to switch between the AirCard and other network cards

Before you can begin using the AirCard

Before you can use the AirCard for the first time you must:

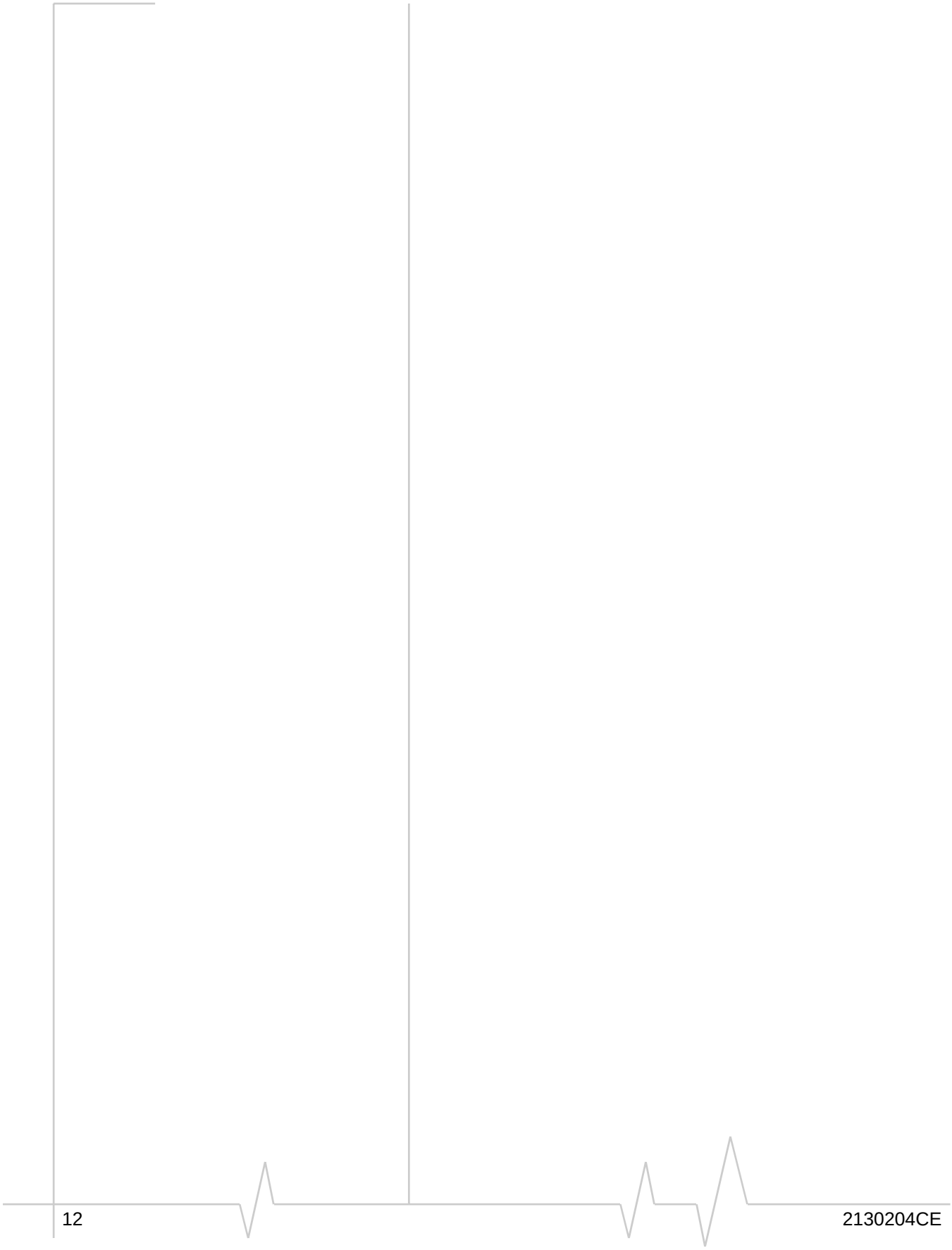
1. Install the AirCard software: Watcher, the Network Adapter Manager (notebooks only), and the AirCard driver.
2. Attach the antenna, insert the SIM into the AirCard and insert the AirCard into your PC Card slot. (Do not insert the AirCard before installing the software.)
3. Obtain a GSM/GPRS/EDGE account (if this wasn't done when you purchased the AirCard).
4. Configure the AirCard to use your account (unless it was pre-configured.)
5. If your Internet browser is configured to use a dial-up modem, you may need to set it to use a network card.

The next chapters guide you through this process.

Package contents

Your AirCard package contains the following:

- AirCard wireless network card
- Antenna
- Installation CD containing the AirCard software and this installation guide
- Quick reference card
- Warranty card



2: The SIM Card and Your Account

- Inserting a SIM card into your AirCard
- Removing a SIM card
- Attaching the antenna to your AirCard

You require a GPRS (AirCard 750) or EDGE (AirCard 775) account and a SIM (Subscriber Identity Module) card to use the AirCard. The SIM card is a small chip (about the size of a postage stamp) that you insert into the AirCard. The SIM contains account information used by the network to validate your access.

Note: Without a valid SIM card and a valid account, your AirCard will not work.

Depending on how you purchased your AirCard, you may already have an account. In this case, the SIM should be included in your package. Otherwise, your retailer should direct you to a local company that provides GSM service.

To activate an account, the service provider needs from you:

- Billing information (such as a credit card number) used to collect payment for your network usage
- Possibly the IMEI (International Mobile Equipment Identity)—a number that identifies your device (AirCard model) on the GSM network. This number is printed on the AirCard box and on the AirCard label.

Note: Keep a written record, in a secure place, of the account information that your service provider gives you. Instructions on creating a profile are in the section "Configuring Your Account" on page 33.

Your AirCard must be configured to use your account. If purchased from a service provider, your AirCard may have been pre-configured. Otherwise, you must set up a profile in Watcher. Instructions on setting up a profile are described in Chapter 5.

If you change GSM service providers (such as if you move to a new city), you will need a new SIM card from your new service provider. You will also need to set up a new profile.

Inserting a SIM card into your AirCard

To install your SIM card into the AirCard network card, follow these steps:

1. If your SIM is attached to a card, detach it and remove any fragments of the card stuck to the SIM.
2. Hold the AirCard network card with the label on top and the antenna closest to you.
3. Locate the thin SIM card slot on the left side of the AirCard PC Card's antenna end.

Note: To prevent the SIM from becoming jammed in the AirCard slot, ensure the edge of the SIM is smooth before inserting it. Do not attach labels to your SIM as this may also cause it to become jammed.

4. Orient the SIM card, as shown in the diagram on the bottom side of the AirCard.

5. Insert the end of the SIM card into the slot, and gently push it until it is fully inserted.

Figure 2-1: Inserting the SIM card Into the AirCard SIM card slot

Once the SIM card is properly inserted, it should not extend beyond the end of the card. See Figure 2-2.

Figure 2-2: A SIM card properly inserted

Removing a SIM card

To remove the SIM card, you will need a narrow object, such as a pen or a straightened paper clip, to push into the eject hole.

1. Place the AirCard PC Card on a smooth, hard surface such as a tabletop, as shown in Figure 2-3.

Figure 2-3: Positioning a pen to eject the SIM card

2. Position your pen or paper-clip above the eject hole, which is on the top surface of the AirCard housing, just to the right of the SIM card slot. (See the photo above.)
3. Press down gently (without excessive force) on the eject hole. The SIM card should pop out of its slot.

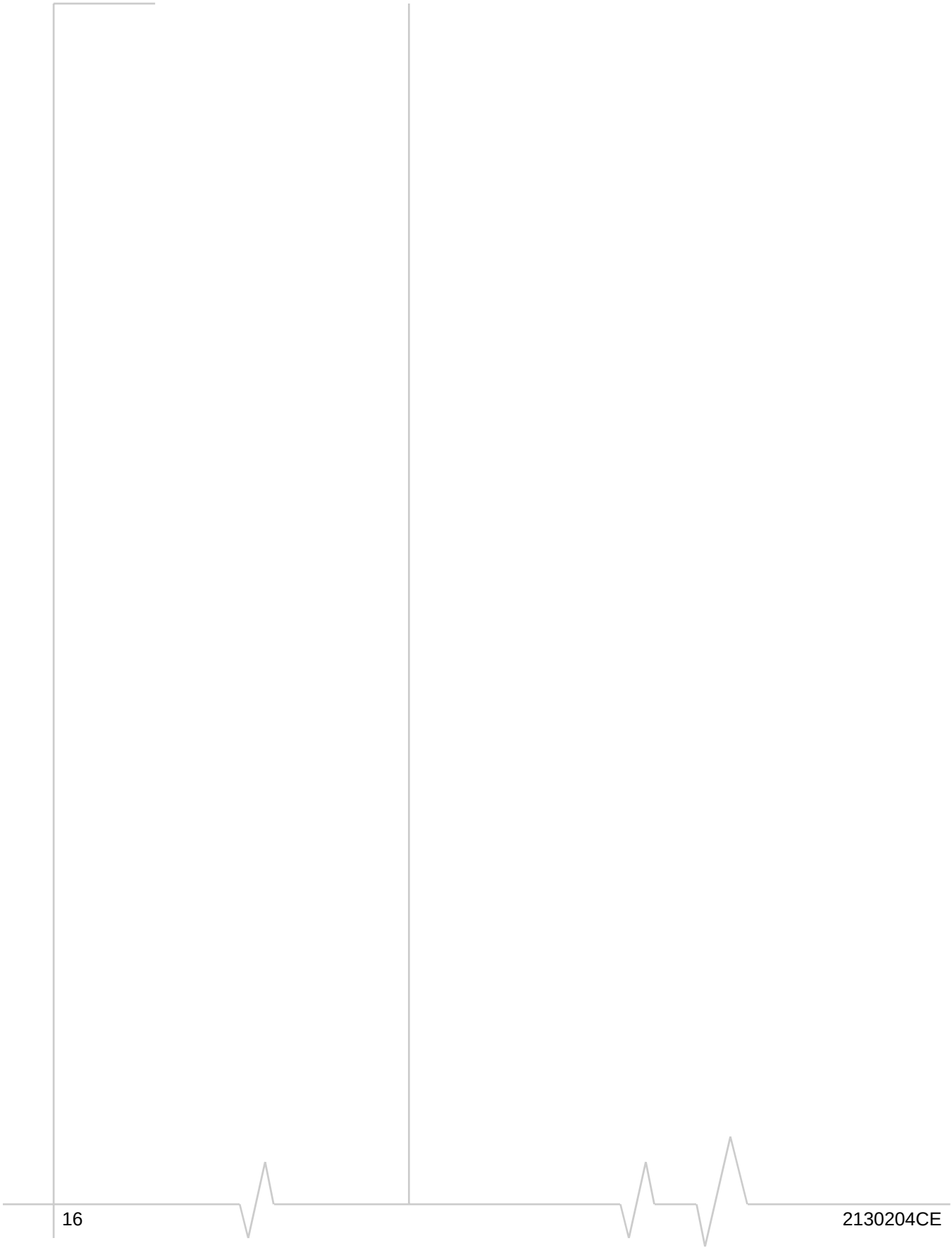
Figure 2-4: Ejecting the SIM card

4. Gently pull the SIM card from the slot until it slides free.

Attaching the antenna to your AirCard

The antenna attaches to the gold-plated connector on the end of the AirCard.

Figure 2-5: Attaching the antenna to the AirCard



3: Installation on Notebook PCs

- System requirements
- Installation on Windows 98, 2000, Me, and XP
- Installation on Windows NT
- Setting Internet Explorer to use the AirCard

Note: Do not insert the AirCard into your PC card slot before installing the software.

This chapter guides you through the steps necessary to making the AirCard operational on a notebook PC. The basic steps are:

1. Insert the AirCard CD into your CD-ROM drive and install Watcher and the Network Adapter Manager.
2. Insert the AirCard into the PC card slot and install the AirCard driver from the CD.

Before you begin the installation process, ensure your PC is running a supported operating system and meets the hardware requirements described below.

System requirements

The AirCard wireless network card is supported on:

- Windows 98 SE
- Windows 2000 with Service Pack 4
- Windows NT 4.0 with Service Pack 6a and Networking installed
- Windows Me
- Windows XP (Home and Professional versions) with Service Pack 1

To install the AirCard, you require these system resources:

Table 3-1: System resource requirements

Card slots	1 Type II PCMCIA (PC Card) slot
Disk drive	CD-ROM
I/O resources	1 IRQ, 40 bytes I/O space
Memory	32 MB

Installation on Windows 98, 2000, Me, and XP

Note: Users of Windows 2000 must be logged in with administrative privileges. Users of Windows XP may require administrative privileges.

Note: If you are running Windows 98 SE, Me, or 2000, Windows Installer Redistributable 2.0 must be installed. This is available on the Microsoft website, www.microsoft.com.

Note: You may require your Windows CD. Ensure you have the CD before proceeding.

1. If the AirCard CD is not already in your CD-ROM drive, insert it. The CD should autostart and display a menu.
   - If the CD does not autostart, select **Start > Run** and enter **d:\setup.exe** where **d** is the drive letter of your CD-ROM drive.
2. From the CD start-up menu, select **notebook installation and documentation** and then **notebook software installation** to launch the installer.

Note: The installer runs twice—once to install Watcher and once to install the Network Adapter Manager.

3. Use the **Next** and **Back** buttons to navigate through the installer.

4. If the SIM is not already inserted in your AirCard, insert it. (See page 13.) If the antenna is not yet attached, attach it. (See page 15.) With the label facing up, insert the AirCard into your PC Card slot:

Note: Do not forcefully insert the AirCard. This may damage connector pins. If you have more than one PC Card slot, you may obtain better signal strength using the top slot.

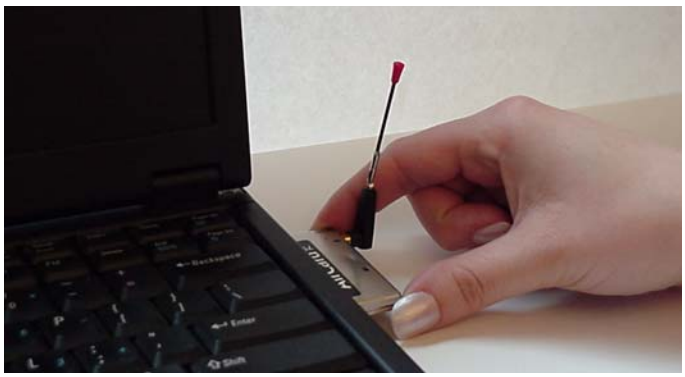


Figure 3-1: Inserting the AirCard

Watcher should launch automatically when the AirCard is inserted. If your AirCard has not yet been configured to use your account, you are prompted to do so. See "Setting up a profile" on page 34.

To close the CD start-up menu, click **Demoshield** on the Taskbar to restore the window, then use the **exit** option in the lower right corner of the window.

Installation on Windows NT

Note: The AirCard driver requires that Windows Networking is installed. Also the PC Card slots must be enabled. If you are not certain that networking is installed and the slots enabled, see the Windows NT user documentation for instructions. You must be logged in with administrative privileges.

Note: You must re-install the Windows NT Service Pack after you install the AirCard driver. Ensure you have your Service Pack CD before you begin. (Version 6a is supported.)

Note: Windows Installer Redistributable 2.0 must be installed. This is available on the Microsoft website, www.microsoft.com.

Note: The Performance Data Helper DLL, PDH.DLL, must be installed. You can download this from the Microsoft web site.

Note: Windows system files may also be required to complete the installation. These files are located on the Windows NT CD.

1. If the AirCard CD is not already in your CD-ROM drive, insert it. The CD should autostart and display a menu.
   - If the CD does not autostart, select **Start > Run** and enter **d:\setup.exe** where **d** is the drive letter of your CD-ROM drive.
2. From the CD start-up menu, select **notebook installation and documentation** and then **notebook software installation** to launch the installer.

Note: The installer runs twice—once to install Watcher and once to install the Network Adapter Manager.

3. Use the **Next** and **Back** buttons to navigate through the installer.

On completion of the software installation, exit from the startup menu by clicking **exit** in the lower right corner.

Inserting the AirCard

Note: Your PC must be off whenever you insert or eject the AirCard.

Note: Do not forcefully insert the AirCard. This may damage connector pins. If you have more than one PC Card slot, you may obtain better signal strength using the top slot.

1. Close all Windows programs and turn your PC off.
2. If the SIM is not inserted in your AirCard, insert it. (See page 13.) If the antenna is not attached, attach it. (See page 15.) With the label facing up, insert the AirCard into your PC Card slot:

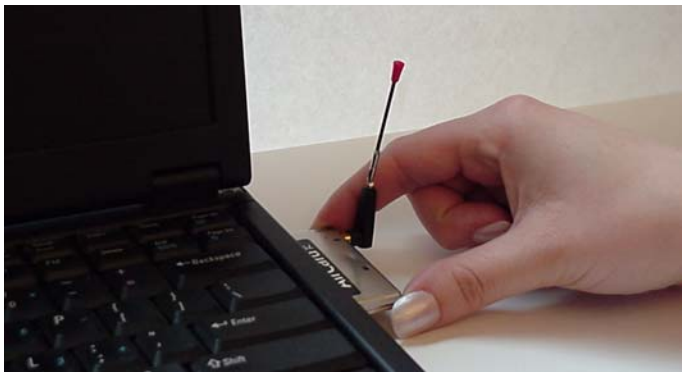


Figure 3-2: Inserting the AirCard

3. Turn on your PC.
4. Log on as Administrator.

Installing the network card driver

Note: Depending on how Windows NT is configured, the prompts and windows described here may not appear in the precise order indicated. Use these instructions as a guideline to the selections you should make.

1. Open the Control Panel by selecting **Start > Settings > Control Panel**.
2. Double-click the Network icon to open the Network window.
3. Click the **Adapters** tab in the Network window.
4. Click the **Add...** button to open the Select Network Adapter window.
5. Click the **Have Disk...** button to open the Insert Disk window.

Note: The AirCard will not function with the default settings for the I/O Port, Interrupt, and Com port if any of these resources are allocated to another network card or other device. If you are familiar with the Windows NT Diagnostics window, you can check to see if these resources are available. Otherwise, leave the default settings and if the AirCard does not function following the driver installation, see the instructions on changing the interrupt on page 22.

6. Enter the path to the drivers as follows (where **c** is the drive letter for your hard drive):
   - For the AirCard 750: **c:\Program Files\Sierra Wireless Inc\AirCard 700 Series\Drivers\WinNT**
   - For the AirCard 775: **c:\Program Files\Sierra Wireless Inc\AirCard 700 Series\Drivers\WinNT-AC775**

   Click **OK** to open the Select OEM Option window in which **Sierra Wireless AirCard GPRS Adapter** or **Sierra Wireless AirCard EDGE Adapter** is selected.
7. Click **OK**. A window opens showing the settings for the I/O Port (0x800), interrupt (10) and COM port (4).
8. If you are aware that these resources are in use by another device (see the note in the margin), change the settings and click **OK**. Otherwise, click **OK** to use the default settings. Windows then copies the driver files.
9. Click **Close** to close the Network window and open the Microsoft TCP/IP Properties window.
10. Select **Sierra Wireless AirCard GPRS Adapter** in the Adapter field and select **Obtain an IP address from a DHCP Server** radio button.
11. Click **Yes** to confirm that DHCP is to be used.
12. Click **OK** to close the TCP/IP Properties window.
13. Click **No** if prompted to restart your PC. (You must restart your PC after the modem driver installation.)

On completion of this step, the network card driver is installed and you can proceed to install the modem driver. Follow the instructions in the next section.

Installing the modem driver

1. In the Control Panel, double click the Modems icon. If the Install New Modem wizard opens, skip to Step 3. Otherwise, proceed to Step 2.
2. Click the **Add** button to open the Install New Modem wizard.
3. Select **Don't detect my modem, I will select it from a list** and click **Next**.
4. Select the **Have Disk** button.
5. Enter **d:\Drivers\WinNT** where **d** is the drive letter for your CD-ROM drive and click **OK**.
6. Verify that **Sierra Wireless AirCard GPRS Modem** or **Sierra Wireless AirCard EDGE Modem** is displayed and click **Next**.

Note: You must restart your PC to complete the installation.

7. Select the **Selected Ports** radio button and select the same communications port used for the network card driver (COM 4 unless you changed it). Click **Next**.
8. Click **Finish**.
9. Click **Close** to close the Network Properties window.
10. If you are prompted to restart your PC, click **Yes**. Otherwise restart your PC from the Start menu.
11. When the PC restarts, re-install your Service Pack.

On completion of this step, the modem driver is installed and you can proceed to configure the AirCard to use your account (if it was not preactivated). See the section "Account Configuration Procedures" on page 33.

Changing the interrupt

If the message, "Communication Failed!…" occurs when you start Watcher, a possible reason is that you have assigned an interrupt to the AirCard that has also been assigned to another device.

To change the interrupt assigned to the AirCard:

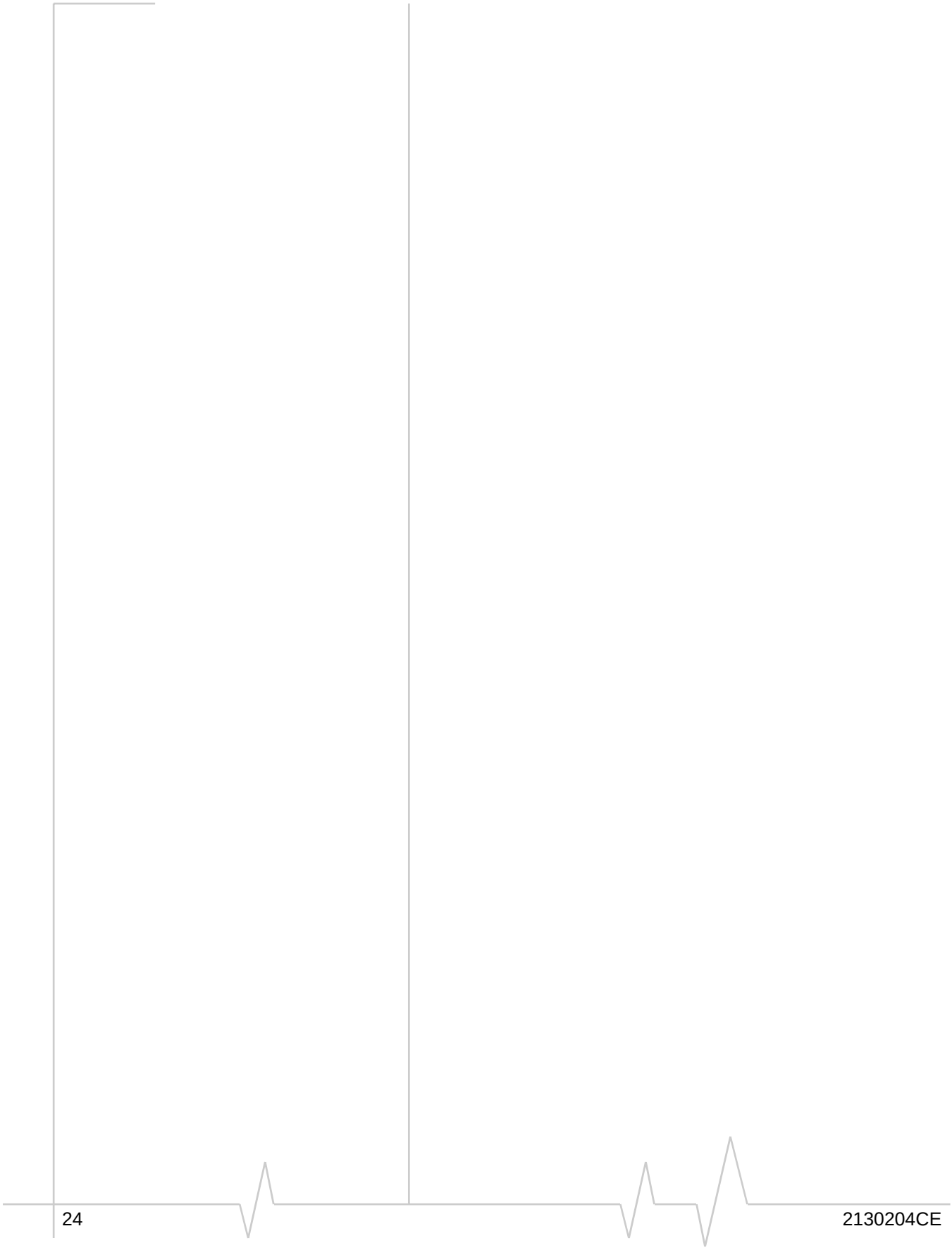
1. Open the Control Panel by selecting **Start > Settings > Control Panel**.
2. Double click the Network icon.
3. Select the **Adapters** tab.
4. Select **Sierra Wireless AirCard GPRS Adapter** or **Sierra Wireless AirCard EDGE Adapter** and click the **Properties...** button.
5. Use the drop-down list to change the Interrupt to another number and click **OK**.
6. Close the Network window by clicking the **Close** button.
7. Restart your PC.
8. If the AirCard still does not function properly, repeat the procedure, selecting a different interrupt.

Setting Internet Explorer to use the AirCard

If you are using Internet Explorer as your browser, and it is set to connect to the Internet through a dial-up modem, you must set it to use a LAN (local area network) card.

To set Internet Explorer version 5 or 6 to use a LAN, follow these steps:

1. In Internet Explorer, select **Tools** > **Internet Options**.
2. Click the **Connections** tab.
3. Click **Setup** to run the Internet Connection Wizard.
4. Select the option "**I want to set up my Internet connection manually, or I want to connect through a local area network (LAN).**" Click **Next**.
5. Select "**I connect through a local area network (LAN)**". Click **Next**.
6. Ensure no check boxes are selected in the "Local area network Internet configuration" window and click **Next**.
7. Select **No** when prompted to set up an Internet mail account and click **Next**.
8. Click **Finish** to exit the wizard.



4: Installation on Devices Running Windows CE

- System requirements
- Pocket PC and Handheld PC installation
- Windows CE .NET device installation
- Inserting the AirCard into a Pocket PC
- Inserting the AirCard into a Handheld or Tablet PC

This chapter provides installation instructions for users of computers running the Windows CE operating system. The AirCard runs on Handheld, Pocket, and Tablet PCs running Windows CE 3.x and CE .NET. (CE .NET is sometimes called CE 4.x).

Before installing the AirCard software on your CE device, ensure you have the required hardware and software. Since software cannot be directly installed to a CE device, you require a desktop or notebook PC to perform the installation. There are two methods of installation:

- If you are running CE 3.x, you install the software to a desktop or notebook PC that functions as the "host". The host connects to the CE device by a cable or infrared ports and the software is downloaded from the host to the CE device using the Microsoft ActiveSync® application.
- If you are running CE .NET, you download a CAB file (a compressed file containing the software) from the AirCard installation CD to either a host PC or a flash card. You then copy the CAB file to the CE device by inserting the flash card into your CE device or by establishing an ActiveSync connection between the host and the CE device.

System requirements

These CE operating systems are supported:

Note: Windows CE 4.x Pocket PC 2003 is also called Windows Mobile™ 2003

Pocket PCs:

- Windows CE 3.0 MS Pocket PC
- Windows CE 3.0 Pocket PC 2002
- Windows CE 4.x Pocket PC 2003

Handheld PCs:

- Windows CE 3.0 Handheld PC 2000

CE .NET devices:

- Windows CE .NET (Windows CE 4.1 or later)

If you have a Pocket PC and do not know what version of Windows CE you are using, select **Start > Settings**, tap the **System** tab, and tap the **About** icon. The second line on the screen identifies your version of Windows CE as follows:

- **Version 4.20.1081 (Build...)**—your operating systems is Windows CE 4.x Pocket PC 2003
- **Windows 3.0.11171 (Build…)**—your operating systems is Windows CE 3.0 Pocket PC 2002
- **Windows 3.0.9348 (Build…)**—your operating systems is Windows CE 3.0 MS Pocket PC

Your CE device must have:

- 2.6 MB of storage memory
- A PC Card slot or, if you are using a Pocket PC, the PCMCIA jacket accessory (If you are using a jacket with two slots, see the important note on page 31.)

ActiveSync installation requirements

If you are installing using ActiveSync, the host PC (the desktop or notebook PC to which you install the software) must have:

- A CD-ROM drive
- ActiveSync version 3.5 or 3.7 installed.

Note: ActiveSync is made by Microsoft and is included with PCs running Windows CE. (It is also available from the Microsoft web site.) ActiveSync 3.5 is supported on Windows 98, 2000, XP, and NT 4.0 with Service Pack 6 or later. ActiveSync 3.7 is supported on Windows 98 SE, 2000, Me, NT, and XP.

Note: ActiveSync 3.5 is required if you are using:
Windows CE 3.0 MS Pocket PC, or
Windows CE 3.0 Pocket PC 2002.

ActiveSync 3.7 is required if you are using:
Windows CE 4.x Pocket PC 2003, or
Windows CE .NET.

You must also have the ability to establish a connection between the CE device and host. This could be:

- An infrared connection (requiring that both the CE device and host have infrared ports).
- A cable connection using either a USB or serial cable (requiring the cable and that the CE device and host have the necessary connectors)

Flash card installation requirements

Note: This method of installation is only available to users of CE .NET (not including Pocket PC users).

If you are installing using a flash card, you require a flash card with at least 5 MB of available memory. You also require a PC that has both a CD-ROM drive and the appropriate flash card reader (and you must be able to read the flash card on your CE device).

Pocket PC and Handheld PC installation

Follow these instructions if your operating system is:

- Windows CE 3.0 MS Pocket PC
- Windows CE 3.0 Pocket PC 2002
- Windows CE 4.x Pocket PC 2003
- Windows CE 3.0 Handheld PC 2000

There are two methods of installing and downloading the software using ActiveSync. You can either:

- Connect the host and the CE device before you install the software to the host. (In this case, you are prompted to initiate the download as soon as the software installation is complete.)

  Or

- Install the software to the host and then connect the host and the CE device, as described here.

Note: Do not insert the AirCard into the CE device before downloading the software.

This process installs Watcher and the AirCard drivers.

Installing the software on the host

1. If the AirCard installation CD is not in your CD-ROM drive, insert it. The CD should auto-start and display a menu.
   - If the CD does not auto-start, select **Start > Run** and enter **d:\setup.exe** where **d** is the drive letter of your CD-ROM drive.
2. From the CD start-up menu, select your language preference, and from the next menu, select **Pocket PC and Handheld PC installation**.
3. From the next menu, select the installation option that corresponds to your version of Windows CE.

This launches the installation wizard that installs the software to the host.

4. Use the **Next**, **Back**, and **Finish** buttons to navigate through the wizard.
   - Using the default settings for the Destination Location and Program Folder is recommended unless you have special requirements and an advanced understanding of PC configuration.
   - A dialog box displays this message, "On the next mobile device connection, the installed applications will be downloaded to the device." Click **OK**.
   - Use the **exit** option in the lower right corner of the window to close the CD start-up menu.

Downloading the software to the CE device

1. Connect the CE device to the host in one of these ways:
   - Connect the CE device and the host PC, using the serial or USB cable provided by the manufacturer of the CE device, or
   - Place your CE device in its cradle and connect the cradle to the host PC using the serial or USB cable provided by the manufacturer of the CE device, or
   - Align the infrared port on your CE device with the infrared port on your host PC

   ActiveSync should launch automatically when the host and CE device are connected.

Note: If you are unable to establish a connection, launch ActiveSync from the Start menu and use the online help in ActiveSync.

2. If you are prompted to indicate whether you want to set up a partnership, click Yes or No and click **Next**. (For the purpose of downloading the AirCard software, it does not matter whether you have a partnership.) You should then be prompted that there is software to download.
3. In the Installing Applications window, click **Yes** to start the download. When complete, you are prompted to check your mobile device screen to see if additional steps are required.
4. Click **OK**.
5. Reset your CE device.
   - If your device has a reset button (usually a circular indentation on the bottom of the device, or in the case of Handheld PCs, on the keyboard) press the stylus or pen into the reset button.
   - If there is no reset button, you may need to run a software utility to reset the device. (Consult the

documentation that came with your PC if you do not know how to reset the device.)

Windows CE .NET device installation

Note: Do not insert the AirCard into the CE device before downloading the software.

To install to a CE .NET device, you must first extract the.CAB file to a host PC, then copy the CAB file to the CE .NET device using ActiveSync or using a flash card.

Extracting the CAB file to the host

On a notebook or desktop PC:

1. If the AirCard installation CD is not in your CD-ROM drive, insert it. The CD should auto-start and display a menu.
   - If the CD does not auto-start, select **Start > Run** and enter **d:\setup.exe** where **d** is the drive letter of your CD-ROM drive.
2. From the CD start-up menu, select your language preference, and from the next menu, select **CE .NET installation**.
3. From the next menu, select **CE .NET software installation (CAB)**. This opens the installation wizard.
4. Click **Next** to display the license agreement.
5. If you accept the terms of the agreement, click **Yes** to proceed.
6. Click the **Browse** button and select the location in which to place the CAB file. If the CAB file will be copied to the CE device using ActiveSync, select a folder on the host PC. If the CAB file will be copied to the CE device using a flash card, select the drive location of the flash card.
7. Click **Finish** to close the installation wizard, and close the start-up menu using the **Exit** option in the lower right corner of the window.

To complete the installation, follow either the steps in the next section, "ActiveSync installation" or the section that comes after it, "Flash card installation".

ActiveSync installation

1. Connect the CE device to the host in one of these ways:

Note: If you are unable to establish a connection, launch ActiveSync from the Start menu and use the online help in ActiveSync.

- Connect the CE device and the host PC, using the serial or USB cable provided by the manufacturer of the CE device, or
- Place your CE device in its cradle and connect the cradle to the host PC using the serial or USB cable provided by the manufacturer of the CE device, or
- Align the infrared port on your CE device with the infrared port on your host PC

ActiveSync should launch automatically when the host and CE device are connected.

2. If you are prompted to indicate whether you want to set up a partnership, click Yes or No and click **Next**. (For the purpose of downloading the CAB file, it does not matter whether you have a partnership.)
3. Select the **Explore** button from the ActiveSync window to open the Mobile Device window.
4. Copy the CAB file from the host to the CE device:
   - Open Windows Explorer, browse to the folder to which you copied the CAB file and drag the file (**AC7X0_xxx_CENET.CAB**, where **xxx** is a language abbreviation) to the Mobile Device window.
5. Click **OK** at the file conversion warning.
6. On the CE device (NOT the host), double tap the CAB file.
7. If a warning occurs, indicating that the application is not supported for this device type, click **Yes** to proceed.
8. Tap **OK** to install the software to the Program Files folder.
9. When prompted to do a soft reset, tap **OK** and reset the device:
   - If your device has a reset button (usually a circular indentation on the bottom of the device, or in the case of Handheld PCs, on the keyboard) press the stylus or pen into the reset button.
   - If there is no reset button, you may need to run a software utility to reset the device. (Consult the documentation that came with your PC if you do not know how to reset the device.)

Flash card installation

1. Insert the flash card into the reader on the CE device.
2. Open Windows Explorer (**Start > Programs > Windows Explorer**) and locate the CAB file that you copied to the flash card (**AC7X0_xxx_CENET.CAB**, where **xxx** is a language abbreviation).

3. Copy the CAB file to a folder on the CE device, if you do NOT want to install from the flash card. (The CAB file will be erased during installation.)
4. Double-tap the CAB file to install the software.
5. If a warning occurs, indicating that the application is not supported for this device type, click **Yes** to proceed.
6. Tap **OK** to install the software to the Program Files folder.
7. When prompted to do a soft reset, tap **OK** and reset the device.
   - If your device has a reset button (usually a circular indentation on the bottom of the device, or in the case of Handheld PCs, on the keyboard) press the stylus or pen into the reset button.
   - If there is no reset button, you may need to run a software utility to reset the device. (Consult the documentation that came with your PC if you do not know how to reset the device.)

Inserting the AirCard into a Pocket PC

To insert the AirCard into a Pocket PC:

1. If the PCMCIA jacket accessory is not already attached, slide the Pocket PC bottom first into the jacket. It should click into place.
2. Ensure the SIM card is inserted into the AirCard (described on page 13) and the antenna is attached (described on page 15).
3. With the label facing towards the front of the Pocket PC, insert the network card into the slot at the top of the jacket, as shown in the photo.

Note: If you are using a jacket that has two slots, ensure the second slot does not contain another network interface card when you use the AirCard.

Figure 4-1: Inserting the AirCard into a Pocket PC

4. Position the antenna so that it is vertical.

Inserting the AirCard into a Handheld or Tablet PC

To insert the AirCard into a Handheld or Tablet PC:

1. Ensure the SIM card is inserted into the AirCard (described on page 13) and the antenna is attached (described on page 15).
2. With the label facing towards the top or front of the PC, insert the network card into the slot, as shown in the photo.

Figure 4-2: Inserting the AirCard into a Handheld PC

3. Position the antenna so that it is vertical.
4. If your PC is not plugged into a power supply, the prompt, "Do you want to use this PC card on battery power?" appears. Tap **Yes**.

5: Configuring Your Account

- Setting up a profile

GPRS profiles contain account information used by the AirCard to establish connections. At least one profile must be set up on the AirCard before you can use it. The profile(s) may have been stored on the AirCard before you purchased it. Otherwise, your service provider should give you all the information you need to set up the profile or profiles you require.

Depending on your service provider, some or all of this information must be entered into your profile:

- User Name
- Password
- APN (Access Point Name)
- IP (Internet Protocol) Address (if the address is not automatically assigned by the network)
- Use of IP header compression
- DNS (Domain Name Server) address or addresses

Your service provider may give you only one APN in which case you require only one profile. Some service providers assign separate APNs for separate purposes. For example, some service providers supply one APN to use for Internet browsing and a different APN to use with a VPN. In this case you must set up multiple profiles. The AirCard allows for up to three profiles.

Most service providers have one or two standard profiles that all or most of their subscribers are expected to use. Most of these standard profiles have been pre-defined in Watcher, allowing you to select a standard profile, rather than creating it manually.

One of your profiles must be set as the “default” profile. This is the one that is used if you select the **Connect** button without selecting a profile. The default profile is also used if you set the AirCard to autoconnect. If you are using the AirCard to access a network that requires you to provide a password each time you connect, you must set the connection mode for your profile to prompt for password (in which case you must connect manually).

Setting up a profile

Note: You cannot set up a profile before installing the software. (See page 17.)(See page 17 for notebook installation instructions or page 25 for CE device installation instructions.)

Notebook PCs

CE devices

To determine whether you have a profile:

1. Insert the SIM into the AirCard if it is not already inserted. (See page 13.)
2. Insert the AirCard into the PC Card slot if it is not already inserted. (See page 20.) (See page 20 for notebook PCs, page 31 for Pocket PCs, or page 32 for Tablet and Handheld PCs.)
3. If Watcher is not running, start Watcher, by selecting **Start > Programs > Sierra Wireless > AirCard 700 Series > Watcher for AirCard 700 Series**

   or double-click the desktop shortcut.

   Select **Start > Programs > Watcher for AirCard 700 Series**

   If Watcher detects that no profile has been set up, you are prompted, "Would you like to configure a profile now?" Select **Yes**.

   If this prompt does not appear, your AirCard may have been preconfigured. You can verify that you have a profile by selecting **Tools** > **Connections** to access the GPRS tab of the Connections window which lists all profiles.

To create a profile

1. On the Connections window, select the **Add** button.
2. If you want to use a pre-defined profile, in the **Profile Name** field, select the profile from the drop-down list. Then skip to Step 5.
3. Complete the fields in the GPRS Profile window by entering a **Profile Name** (any meaningful description of the profile, such as the name of your service provider) and **User Name**, **Password**, and/or **APN**, if applicable.
4. Select whether you want to make connections automatically or manually, or whether you are required to provide a password each time you make a connection:
   - If you select **Autoconnect**, a connection is established automatically whenever you insert the AirCard.
   - If you select **Manual**, you must select the **Connect** button on the main Watcher window to make a connection.
   - If you select **Prompt for Password**, you must select **Connect** and enter a password to make a connection. Use this

option if you have an external device that provides a time-scheduled secure password for your corporate network.

5. If you want to set Watcher to launch your Internet browser, VPN, or any other program automatically, or if your service provider specified an IP address, DNS address(es), or Quality of Service (QoS) parameters, select the **Advanced** button to open the Advanced Profile window. Otherwise, click **OK** and skip to Step 12.

6. On the Autolaunch tab, select which application, if any, you want Watcher to automatically launch when a connection is established with this profile:
   - **None**—Select this if you do not want any application to be autolaunched.
   - **Browser**—Select this if you want Watcher to autolaunch your Internet browser (such as Internet Explorer or Netscape Communicator) when a connection is established with this profile. In the URL field, specify the web site (such as http://www.sierrawireless.com) you want to view on connection.
   - **Microsoft VPN (PPTP) Connection**—Select this if you want Watcher to autolaunch a VPN connection that you have set up in Windows when a GPRS or EDGE connection is established with this profile. From the drop-down list, select the VPN connection.
   - **Application (VPN Client, etc...)**—Select this if you want Watcher to autolaunch an installed VPN program, or any other program, when a GPRS or EDGE connection is established with this profile. In the field below, enter the path to the program, or use the **Browse** button to locate the software.

7. If your service provider has given you an IP address, on the TCP/IP tab, select **Use static IP address** and enter the address in the field below. Otherwise select **Use dynamic IP address**. (This is the default because most networks use dynamic IP addressing.) Use the check boxes to enable data compression or IP header compression if supported by your service provider.

*Note: The **Use IP header compression** field should NOT be checked unless your service provider is using this compression. The AirCard cannot maintain a connection if this is enabled but not supported on the network.*

8. If you have a DNS address or addresses, select the DNS tab and enter the address(es). (In most cases, it is not necessary to enter a DNS address.)

9. If your service provider specifies values for Quality of Service (QoS) parameters, enter those settings on the appropriate tabs (**Minimum QoS** and **Requested QoS**). (In most cases it is not necessary to adjust Quality of Service parameters and the tabs do not appear.) Do NOT change any Quality of Service parameters unless advised to do so by your service provider.
10. Select **OK** to close the Advanced Profile window.
11. Select **OK** to close the GPRS Profile window.
12. If you have more than one profile, use the **Default Profile** radio button to select which is the default. (The "default" profile is the one used by the autoconnect feature and is used if you select **Connect** without selecting a profile.)

6: Care and Maintenance of Your Network Card

- Stopping and ejecting the AirCard on a notebook PC
- Ejecting the AirCard on a Pocket PC
- Ejecting the AirCard on a Handheld or Tablet PC

You can ensure reliable operation and long life of your AirCard by adhering to these guidelines in storage and use:

- Do not apply adhesive labels to the AirCard or SIM. This may cause the AirCard or SIM to become jammed inside the slot, or prevent it from being inserted properly.
- When not installed in your computer, store the AirCard and SIM in a safe place.

Note: Do not insert the AirCard before installing the software. See "Installation on Notebook PCs" on page 17. See "Installation on Notebook PCs" on page 17 or "Pocket PC and Handheld PC installation" on page 27 for installation instructions.

- When storing or transporting your PC in a case (such as a notebook case) remove the antenna and place it in a compartment.
- Protect the card from liquids, dust, and excessive heat (see "Environmental specifications" on page 53 for details).
- The AirCard should fit easily into your computer's PC Card slot. Forcing the AirCard into the slot may damage the connector pins.
- Optimal signal strength is usually obtained when the antenna is pointing straight up. The antenna should bend easily at the hinge. Do not forcefully bend the antenna.

Figure 6-1: Proper positioning of the AirCard antenna

When you insert the AirCard in a notebook PC, the following should happen:

- The PC beeps (unless the effect is disabled).

Windows PC Card icons

95/98	Me/2000	XP

- The PC Card icon appears in the status area (usually located in the lower right corner of the screen) unless the feature is disabled.
- The Network Adapter Manager icon for the AirCard also appears in the status area.
- Watcher launches (unless the autolaunch option is disabled).

Stopping and ejecting the AirCard on a notebook PC

Windows NT

If you are using Windows NT, your PC must be off whenever you insert or eject the AirCard.

Windows 95, 98, 2000, Me, XP

To remove the AirCard:

1. Close Watcher if it is open.
2. Click the PC Card icon in the status area to display the option to stop the card.
3. Click "Stop Sierra Wireless AirCard GPRS/EDGE Adapter Parent" (Windows 95, 98, 2000, or Me) or "Safely remove Sierra Wireless AirCard GPRS/EDGE Adapter Parent" (Windows XP).
4. If a dialog box appears notifying you that it is safe to remove the card, click **OK**.
5. Push the PC Card eject button on your computer to eject the card.

Figure 6-2: Ejecting the AirCard from its slot

6. Grasp the AirCard and remove it from the slot.

Ejecting the AirCard on a Pocket PC

To remove the AirCard from your Pocket PC:

1. Stop Watcher by selecting **Start > Settings > System tab > Memory > Running Programs**. In the "Running Program List", select "**AirCard 700 Series Watcher**", then tap **Stop**.
2. Push the PC Card eject button on the Pocket PC to eject the card.

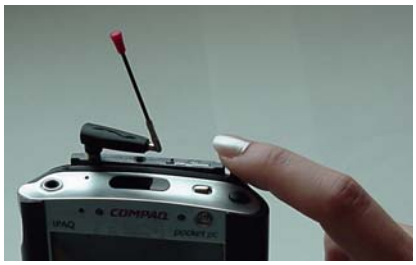


Figure 6-3: Removing the AirCard from its slot (Pocket PC)

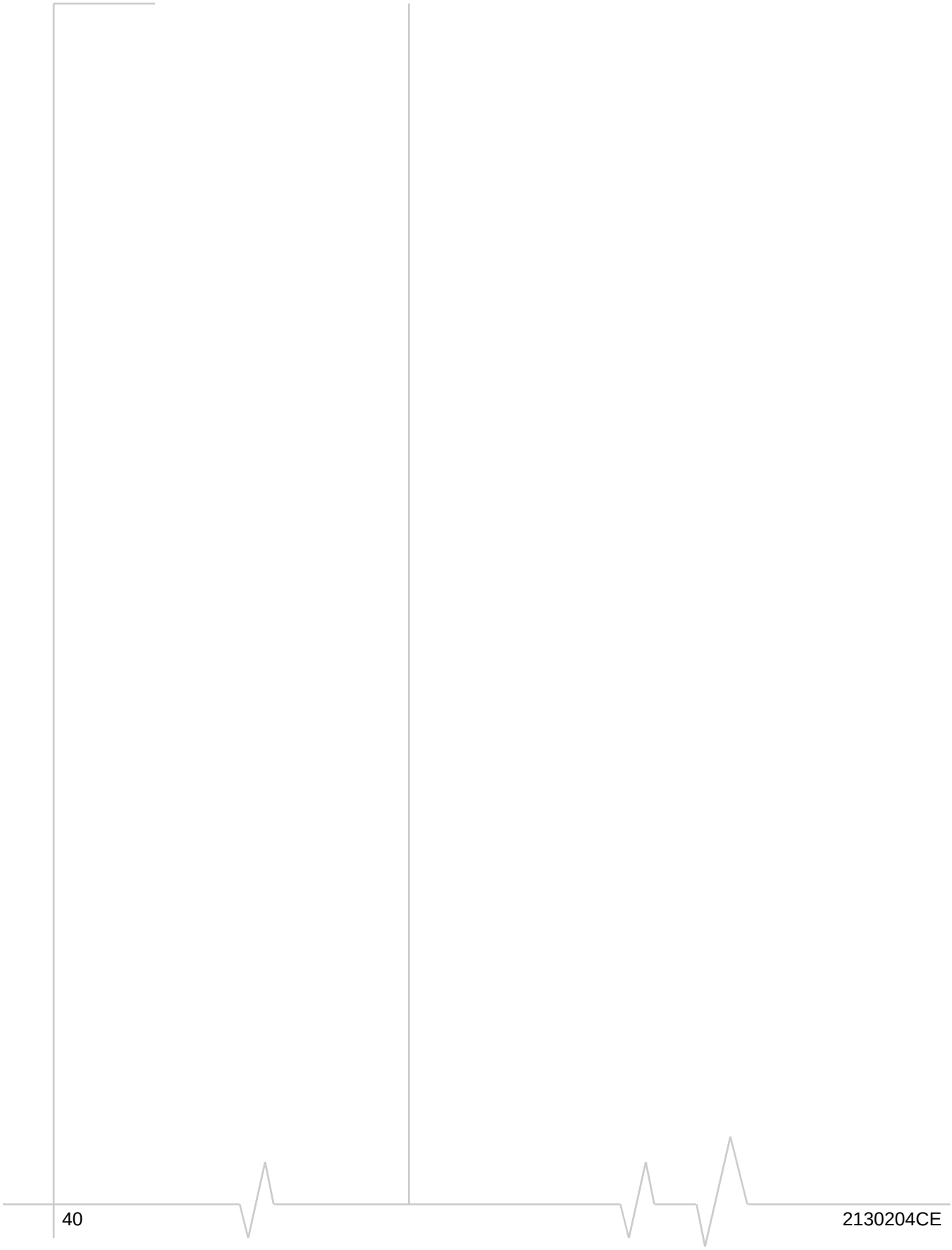
3. Grasp the AirCard and remove it from the slot.

Ejecting the AirCard on a Handheld or Tablet PC

To remove the AirCard from your Handheld PC:

1. Close Watcher.
2. Push the PC Card eject button on your computer to eject the card.

Figure 6-4: Ejecting the AirCard from its slot



7: Watcher™ Basics

- Launching Watcher
- The Watcher window
- Icons and indicators on the main Watcher window
- View options (notebook PCs)
- Status Icons
- Power Options
- Frequency band and network selection

Watcher is the program you use to manage and monitor your AirCard connections. Watcher allows you to:

- Create an account profile. (This is explained under "The SIM Card and Your Account" on page 13.)
- Determine signal strength, roaming status, GPRS/EDGE availability, and other network connection parameters
- Monitor the status of the AirCard and GSM service
- Initiate data connections
- Make and receive phone calls
- Send and receive SMS messages
- Enable or disable SIM security that prevents others from using your SIM card if it is lost or stolen
- Set options related to battery power consumption
- Set options related to notifications and the Watcher window

Depending on what model of AirCard you are using and on how it is configured, you may have access to these features:

- **Outlook integration.** This allows you to store, send, and read SMS messages in Outlook so that you are managing both e-mail and SMS messages from a single application, (assuming you are using Outlook for e-mail).
- **WiFi support.** This allows you to manage and monitor a WiFi device within Watcher.

Note: It takes up to 20 seconds for Watcher to become fully functional after launch.

If you set your account profile to autoconnect (see page 34), you do not need to run Watcher when you use the AirCard, but Watcher does provide useful status information.

Notebooks PCs

CE Devices

Launching Watcher

On notebook PCs, unless the feature has been disabled, Watcher launches automatically anytime you insert the AirCard. You can also launch Watcher by:

- Double clicking the desktop shortcut, or
- Selecting **Start > Programs > Sierra Wireless > AirCard 700 Series > Watcher for AirCard 700 Series**

To launch Watcher on a CE device, select **Start > Programs > Watcher for AirCard 700 Series**

Depending on how your profile is configured, your browser, VPN, or other program may launch automatically anytime you launch Watcher. See page 35.

The Watcher window

*Note: To get help in Watcher, select **Help > Help Topics**. You can also display help by pressing <F1> in most windows.*

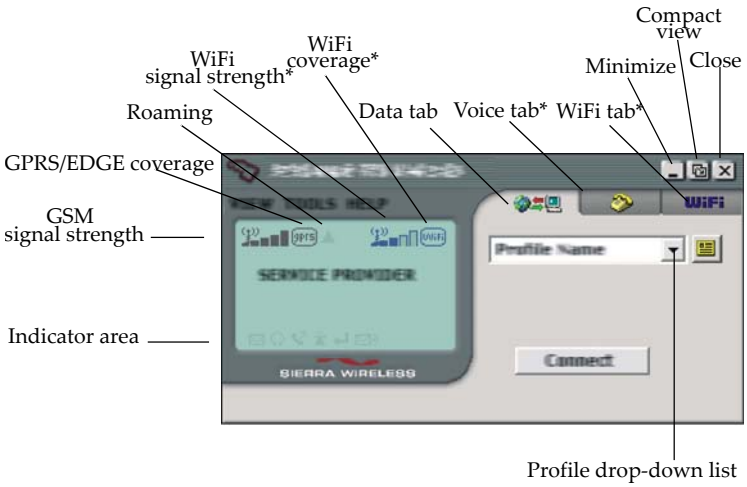
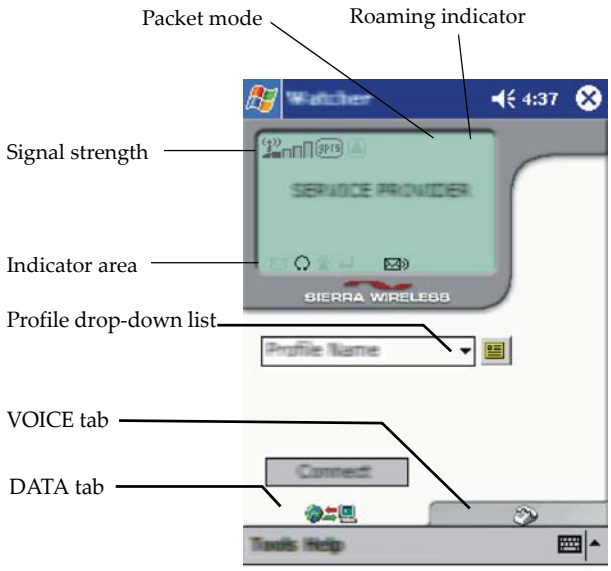


*Figure 7-1: The Watcher window. Components marked with an * are only available if your software is voice-enabled and/or WiFi-enabled and only on notebook PCs.*

Note: To get help for Watcher on a Pocket PC, select **Start > Help**.

Pocket PCs



Icons and indicators on the main Watcher window

These icons are used on the main Watcher window:

Table 7-1: Icons and indicators in Watcher

Icon	Meaning
	Device status. If an AirCard icon with an "X" is displayed, Watcher is unable to detect the AirCard. The ToolTip that displays when you position the mouse pointer over this indicator says, "Device not available". This usually indicates that the AirCard is not fully inserted into the PC Card slot. If an AirCard icon with a "?" is displayed, Watcher has detected the AirCard but is unable to communicate with it. The ToolTip that displays when you position the mouse pointer over this indicator says, "Device not responding". You may be able to resolve this problem by restarting Watcher, by stopping, ejecting, and reinserting the AirCard, or by restarting your PC.

Table 7-1: Icons and indicators in Watcher

Icon	Meaning
       Depending on your AirCard configuration, you may have two signal strength indicators. If you have two, the indicator on the right shows the WiFi signal strength (the hotspot with the strongest signal).	**Signal strength and service status.** The number of bars beside the antenna increases as signal strength increases, to a maximum of five bars. The ToolTip that displays when you position the mouse pointer over this indicator, shows the numeric value of the RSSI (Received Signal Strength Indication in dBm). Blank bars in the signal strength indicator mean that you are outside of the coverage area or have insufficient signal strength to maintain a GSM data connection. A red thermometer icon indicates overheating. In the unlikely event that this occurs, the AirCard suspends data transmission until the temperature drops, then normal operation is resumed. (This usually takes no more than 10 seconds.) A red flashing antenna icon indicates an antenna problem. If this occurs, try reorienting the antenna and ensure that there is nothing on or near the antenna that could be blocking the signal.
     Depending on your AirCard configuration, you may not have this indicator.	**GPRS coverage**. When only the letters of this indicator are displayed, you are within the GPRS coverage area but have not yet acquired service. When the indicator has an outline, you have acquired GPRS service and are able to establish GPRS data connections. When the indicator is filled in, you have a GPRS connection.

Table 7-1: Icons and indicators in Watcher

Icon	Meaning
edge edge edge **This indicator only appears if you are using an AirCard 775 configured to present the indicator.**	**EDGE coverage**. When only the letters of this indicator are displayed, you are within the EDGE coverage area but have not yet acquired service. When the indicator has an outline, you have acquired EDGE service and are able to establish EDGE data connections. When the indicator is filled in, you have an EDGE connection.
▲ **Depending on your AirCard configuration, you may not have this indicator**	**Roaming.** When displayed, you are connected to a network other than your local service provider's. There may be a surcharge for roaming service.
✉	**New SMS message.** Select the icon to open the SMS Express window and read your messages. When your SIM becomes full, this icon flashes and turns red.
◌	**Headset.** If your AirCard is voice-enabled, this indicator is displayed when a headset is attached.
✆	**Incoming call.** If your AirCard is voice-enabled, this indicator is displayed when you get a phone call.
✆	**Missed call.** If your AirCard is voice-enabled, this indicator is displayed when you fail to answer an incoming call. Select the icon to open the call log and view the numbers of the calls you missed (assuming you have caller ID service with your account).
✉	**Voice mail.** If your AirCard is voice-enabled, this indicator is displayed when you have a new voice message. Select the icon to access your voice mail box (assuming you have voice mail service with your account).

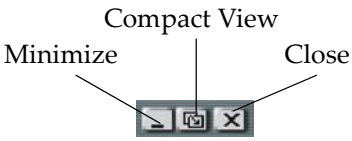
Table 7-1: Icons and indicators in Watcher

Icon	Meaning
	Call forwarding. If your AirCard is voice-enabled, this indicator is displayed when call forwarding is in use. (This is only on when all calls are forwarded.)
 	Data transmission. When this indicator is on and neither circle is shaded, you have a connection but no data transmission is occurring. A shaded top circle indicates that data is being sent and a shaded bottom circle that data is being received. These statistics are displayed during GPRS/EDGE connections only; no statistics are displayed for dial-up or WiFi connections.

View options (notebook PCs)

On notebook PCs, you have these options concerning the Watcher window:

- You can enable/disable always on top from the VIEW menu. When enabled, the Watcher window always appears in front of other application windows.
- You can switch between the full Watcher window and the compact window from the VIEW menu or by using the Compact View button:



- You can use the Minimize button to close the Watcher window but leave the program running.

Status Icons

These icons appear in the system tray (usually in the lower right corner of your screen).These icons appear in the system tray (usually in the lower right corner of your screen on notebook, Tablet, and Handheld PCs, and on the lower right corner of the Today page on Pocket PCs).

Table 7-2: Status Icons

Icon	Meaning
	You have a GPRS or EDGE connection.
	You do not have a GPRS or EDGE connection.
	You have one or more unread SMS messages.

Power Options

The AirCard draws power from your PC's battery. There are two features of the AirCard that allow you to manage battery power consumption:

- The power down/power up option
- The transmit power consumption option

Power Down and Up

The power down/power up option allows you to conserve your battery by powering the AirCard down when you're not using it.

To power down the AirCard:

1. Select **Tools > Power Down**

When powered down, the menu option switches to Power Up and the message, "Device powered down" is displayed on the Watcher window.

You cannot maintain a connection when the AirCard is powered down.

Transmit power consumption

Note: If you are using the AirCard in a CE device, it is recommended that you set the Transmit Power Consumption to ***low****.*

The Transmit Power Consumption option allows you to choose between maximizing your data transmission speed or minimizing battery drain on your PC. The settings for this option are:

- Normal (Notebook)
- Medium
- Low (PDA)

If you select **Normal (Notebook)**, the AirCard takes advantage of certain network resources (if they are available) to maximize the upload transmission speed. This increases peak battery consumption slightly but the increase has little effect. This increases peak battery consumption slightly but unless you are using a CE device, the increase has little effect. (The maximum possible data transmission speed with this setting is 56 kbps).

If you select **Low (PDA)**, the AirCard makes no attempt to take advantage of faster upload speeds that might be possible on some networks. This minimizes peak battery consumption. This minimizes peak battery consumption and is the recommended setting for CE devices because they are unable to meet the peak power demands of the AirCard while operating at the highest upload transmission speeds. (The maximum possible data transmission speed with this setting is 14.4 kbps).

The **Medium** setting has a maximum possible data transmission speed of 28.8 kbps.

The change in data transmission speed or peak battery consumption that results from changing these settings is dependent on network conditions (such as the number of users in your area), and in some circumstances, may not be noticeable.

This setting does not affect the speed of downloads (data transmissions from the network to the AirCard).

When you change this setting, the AirCard resets—all data and voice connections are terminated. This option is set on the Network tab of the Options window (TOOLS > Options).

Frequency band and network selection

Watcher has two options that affect your ability to obtain GPRS or EDGE service in any given area. You can select:

- The frequency band you want to use
- The network you want to use, if you are within the coverage area of more than one network

Frequency band selection

Every GSM network operates on one set of frequency bands. (See "Frequency band selection" on page 49.) The AirCard is designed to change frequency bands automatically as required to obtain network service. You can also change frequency bands manually from the Network tab of the Options window (**TOOLS > Options > Network**).

Note: Unless your service provider specifies otherwise, it is recommended that you use the **Auto** *setting.*

Network selection

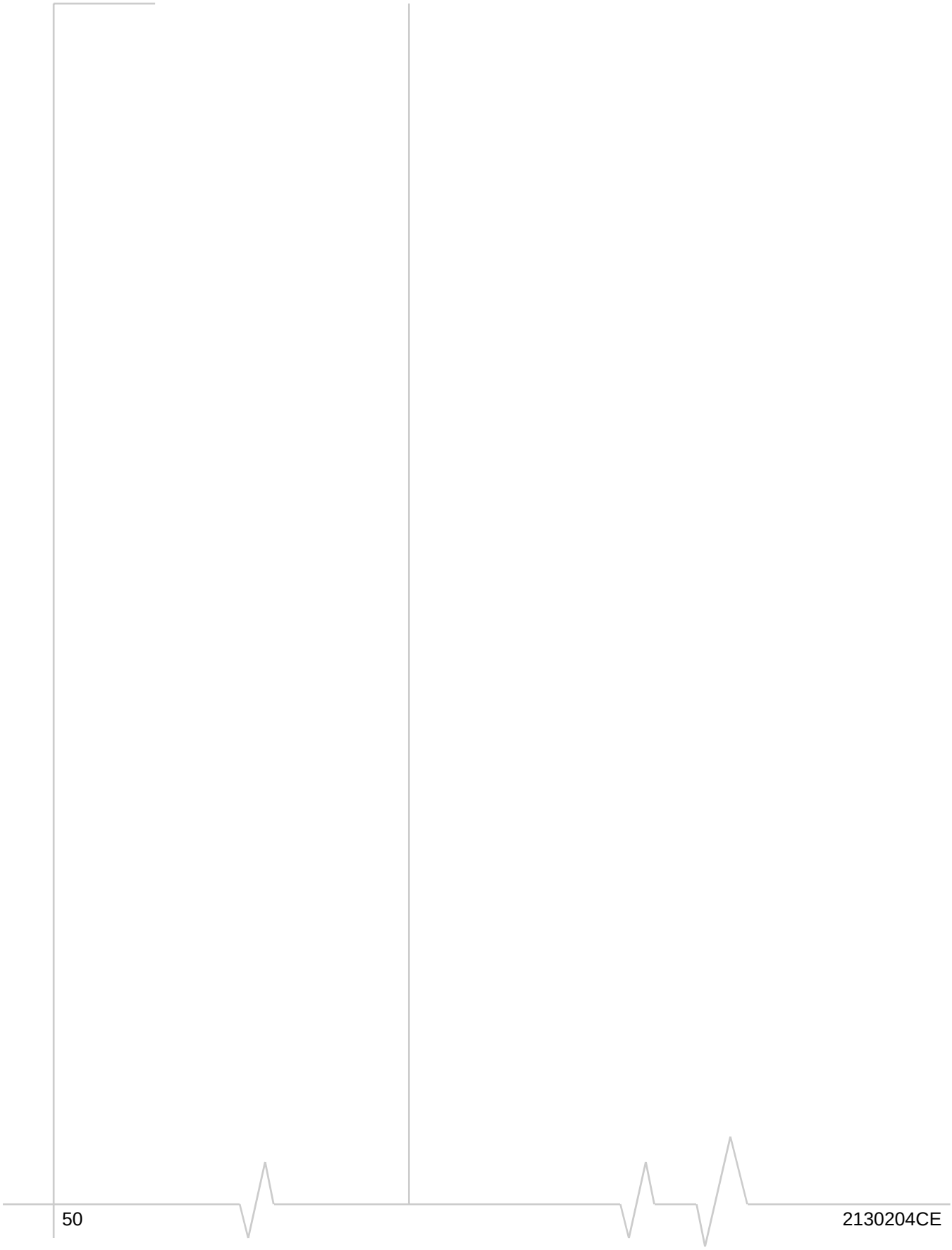
Depending on your location, you may be within the coverage area of several networks. Your ability to obtain service on each network is dependent on your account.

Your options for network selection are:

- **automatic**—the AirCard automatically selects a network based on your account and network availability.
- **manual**—the AirCard scans the area and displays a list of detected GSM networks. You can then choose from a list of available networks.

If you select a network on which you cannot obtain service, the message, "Failed to register with network" appears. You should then choose a different network.

This option is set on the Network tab of the Options window (**TOOLS > Options > Network**).



8: Technical Specifications

- LED operation
- Radio frequency and electrical specifications
- Environmental specifications
- Sending GSM commands to the network

This chapter describes the operation of the LED and provides technical data for the AirCard® 700 Series wireless network card.

LED operation

The AirCard has a single LED (Light Emitting Diode) located on the antenna end of the card beneath the SIM slot. The color (red, green or amber) and state (off, on solid, or blinking) of the LED indicate the connection status as follows:

Table 8-1: LED operation

LED state	How to interpret
Solid amber[a]	The AirCard is powering up, or a firmware download is in progress.
Blinking amber	The AirCard is scanning for service.
Blinking green	The AirCard is in service and registered on the network.
Solid green	A voice call is in progress.
Blinking red	There is a hardware problem.
Off	The AirCard is powered down.

a. The LED is red/green. The amber color occurs when both red and green are lit.

Radio frequency and electrical specifications

Table 8-2: Radio frequency & electrical specifications

Compliance	AirCard 750 compliant with: GPRS GSM Release 97 SMG 31 Phase 2+ AirCard 775 compliant with: GSM Release 99	
Multi-slot class	Class 12	
Transmit	**AirCard 750** *PCS:* 1850 to 1910 MHz *DCS1800:* 1710 to 1785 MHz *EGSM900:* 880 to 915 MHz	**AirCard 775** *PCS:* 1850 to 1910 MHz *DCS1800:* 1710 to 1785 MHz *EGSM900:* 880 to 915 MHz *GSM850* 824 to 849 MHz
Receive	**AirCard 750** *PCS:* 1930 to 1990 MHz *DCS1800:* 1805 to 1880 MHz *EGSM900:* 925 to 960 MHz	**AirCard 775** *PCS:* 1930 to 1990 MHz *DCS1800:* 1805 to 1880 MHz *EGSM900:* 925 to 960 MHz *GSM850:* 869 to 894 MHz
Channel spacing	200 kHz	
Frequency stability	0.1 ppm	

Environmental specifications

Table 8-3: Environmental specifications

Operating temperature	-20 to +60 °C (ambient, outside PCMCIA enclosure)
Storage temperature	-30 to +85 °C
Humidity	95%, non-condensing
Vibration	15 g peak 10 to 2000 Hz (non-operating)

Sending GSM commands to the network

GSM commands are used to:

- Access network services
- Display network and device parameters
- Provide account status information (for example, indicate whether a subscribed service is available to you)

If your service provider asks you to enter a specific command:

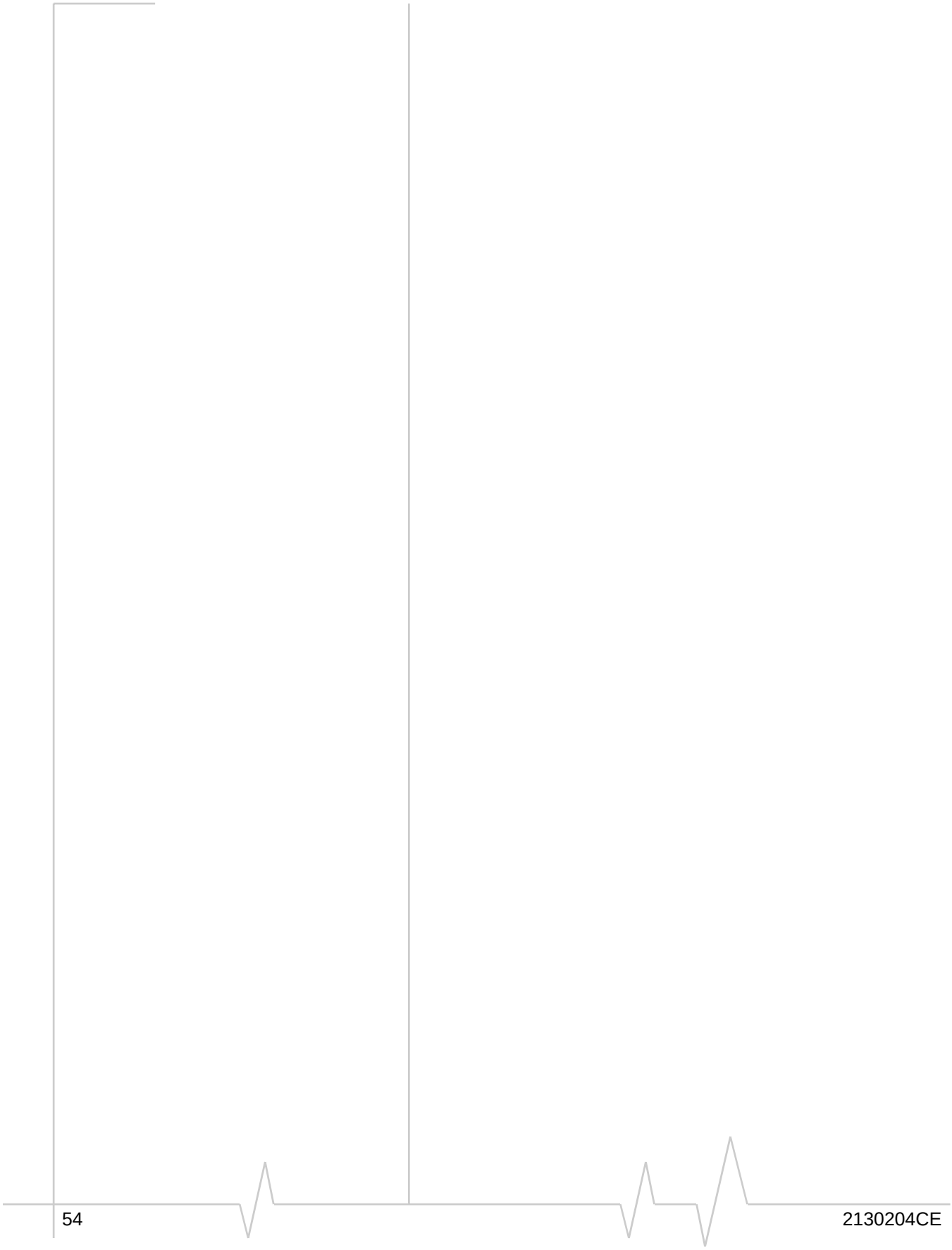
1. Using your keyboard or the keypad on the VOICE tab in the main Watcher window, type the command.

   If the command was valid and accepted by the network, the results are displayed in the Watcher window. Otherwise, the message "Invalid GSM Command" is displayed.

For example, enter *#06#. This command displays the IMEI[1].

You can send GSM commands even when a voice call or data transfer is in progress.

1. IMEI—International Mobile Equipment Identity—a number that uniquely identifies your device (AirCard wireless network card) on the GSM network



9: Regulatory and Safety Information

- Important notice
- EU regulatory conformity

Important notice

Because of the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the Sierra Wireless network card are used in a normal manner with a well-constructed network, the Sierra Wireless network card should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Sierra Wireless and its affiliates accept no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the Sierra Wireless network card, or for failure of the Sierra Wireless network card to transmit or receive such data.

Safety and hazards

Do not operate your AirCard wireless network card:

- In areas where blasting is in progress
- Where explosive atmospheres may be present including refuelling points, fuel depots, and chemical plants
- Near medical equipment
- Near life support equipment, or any equipment which may be susceptible to any form of radio interference. In such areas, the AirCard **MUST BE POWERED OFF**. Otherwise, the AirCard can transmit signals that could interfere with this equipment.

In an aircraft, the AirCard **MUST BE POWERED OFF**. Otherwise, the AirCard can transmit signals that could interfere with various onboard systems and may be dangerous to the operation of the aircraft or disrupt the cellular network. Use of a cellular phone in an aircraft is illegal in some jurisdications. Failure to observe this instruction may lead to suspension or denial of cellular telephone services to the offender, or legal action or both.

Some airlines may permit the use of cellular phones while the aircraft is on the ground and the door is open. The AirCard may be used normally at this time.

CAUTION: The AirCard 750 has been tested for compliance with FCC / IC RF exposure limits in the laptop computer(s) configurations with side PCMCIA slot and palmtop computers with rear PCMCIA slot, and can be used in laptop computers and palmtop computers with substantially similar physical dimensions, construction, and electrical and RF characteristics. The AirCard 775 has been tested for compliance with FCC / IC RF exposure limits in the laptop computer(s) configurations with side PCMCIA slot, and can be used in laptop computers with substantially similar physical dimensions, construction, and electrical and RF characteristics. Always place the antenna in the upright position (oriented vertically) when using the AirCard in a notebook computer. Note: If this PC Card is intended for use in any other portable device, you are responsible for separate approval to satisfy the SAR requirements of Part 2.1093 of FCC rules.

EU regulatory conformity

Sierra Wireless hereby declares that the AirCard 750 and AirCard 775 are in conformity to all the essential requirements of Directive 1999/5/EC.

AirCard 750:

CE 0682

AirCard 775:

CE 0984

The Declaration of Conformity made under Directive 1999/5/EC is available for viewing at the following location in the EU community:

Sierra Wireless (UK), Limited
Lakeside House
1 Furzeground Way, Stockley Park East
Uxbridge, Middlesex
UB11 1BD
England

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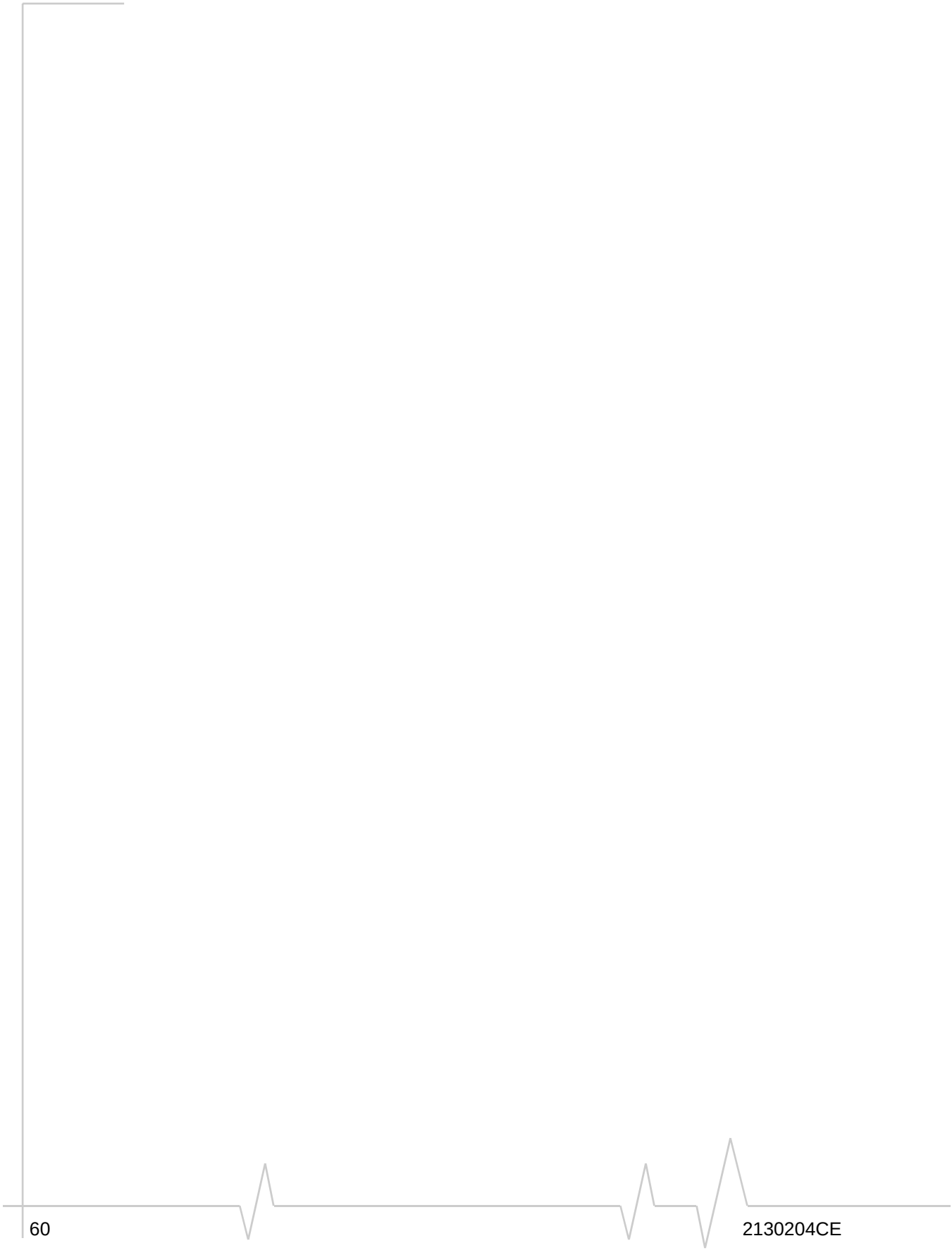

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